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09/252,485	02/18/1999	JOHN S. HENDRICKS	5615	4559

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EXAMINER	
GRANT, CHRISTOPHER C	
ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/252,485	Applicant(s) HENDRICKS et al.
	Examiner Christopher Grant	Art Unit 2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on _____.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 1-72 is/are pending in the application.

4a) Of the above, claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 1-72 is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 3
4) ☐ Interview Summary (PTO-413) Paper No(s). _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. Claims 55-56 and 58 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The current invention is an apparatus and method for outputting a plurality of signals or an apparatus for displaying a picture on a picture and corresponding method to the system illustrated in figure 14.

The specification and drawings fail to enable one of ordinary skill in the art to make or use the following limitations:

a) "**the apparatus is an upgrade card, the upgrade card insertable into a settop terminal to provide digital picture-on-picture capability**" as recited in claim 55;

b) "**the apparatus is an upgrade card, the upgrade card insertable into a television terminal to provide digital picture-on-picture capability**" as recited in claim 56;

c) "**the second video signal is a close captioned text display that corresponds to an audio signal related to the first video signal"** as recited in claim 58;

Mere recitation to these limitations in the disclosure are insufficient.

2. Claims 17-20, 22-25, 57, 58, 61 and 64 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 17 is vague because the phrase "**combining the plurality of the program signals; and**" (line 29) is incomplete.

Claim 22 is vague because the phrase "**the plurality of audio signals corresponding therewith;and**" (in line 6) is incomplete.

Claim 57 is vague because the phrase "**wherein the first video signal is provided to a final television and the second video signal is provided to a second television**" contradicts the "**...first video signal and the second video signal are displayed on a display**" as recited in independent claim 41, line 3. The first and second televisions suggest that two displays are involved and not one display.

Claim 58 is vague because a video signal can not be closed captioned text. Closed captioned text is either transmitted in a video signal or with a video signal.

Claim 61 is vague because an audio signal cannot be displayed. Audio signals are normally outputted to speakers and video signals are outputted to displays.

Claim 64 is vague because an audio signal cannot be displayed. Audio signals are normally outputted to speakers and video signals are outputted to displays.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1, 7-15, 26-33, 41-52, 57-59, 60 and 61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arai and Willis et al. (Willis).

Considering claims 1, 7-9, 21, 26-27 and 41-42, Arai discloses an apparatus for displaying a picture on a picture and corresponding method comprising:

a) a plurality of tuners (5A, 5B) (figures 3A and 3B);

b) a plurality of demodulators (27, 28);

c) a plurality of output ports wherein at least two of the plurality of output ports are connected to different tuners (see audio output from demod (27) to switch (10), three video outputs from demod (27) to combiner (8), audio output from demod (28) to switch (10), three video outputs from demod (28) to combiner (8)); and

d) a microprocessor (26) connected to the plural tuners (5A, 5B) and demodulators (27,28) for coordinating signal processing.

Note that Arai is interested in processing several different television standards for simultaneous display (col. 1, lines 5-15) and he indicated that various changes or modifications may be made to his system (col. 17, lines 10-34). However, he fails to disclose a plurality of

demultiplexors, a plurality of decrypters, a plurality of decompressors and a plurality of NTSC encoders as recited in the claims.

Wasilewski discloses a system for transmitting and receiving digital television signals (figures 1-14). Digital television is another type of television standard. The digital receiver (figure 14) comprises: a demodulator (250), demultiplexer (258, 268, 272), decryptors (274), decompressors (276, 280) for decompressing video, audio and text and NTSC encoders (276,280) (columns 21-24). These are typical elements in a digital receiver for processing digital signals transmitted from a central broadcasting facility. Further, note that Wasilewski's system may be used in various applications. See col. 2, line 41 - col. 3, line 14 and col. 34, lines 12-30.

It would have been obvious to one of ordinary skill in the art to modify Arai's system to include a plurality of digital receiving circuit elements such as demultiplexors, decrypters, decompressors and NTSC encoders, as taught by Wasilewski, for the typical advantage of providing digital television receiving elements to properly decode and process digital signals transmitted from a central broadcasting facility and/or to provide higher quality signals to viewers.

Claims 10 and 43 are met by the combined systems of Arai and Wasilewski, wherein Wasilewski discloses that the demultiplexing process includes one or more storage, buffer or memory in col. 24, lines 57-68. Furthermore, temporary storage or buffering of audio, video and graphics/text signals are necessary in various stages of the decoding process to ensure proper recovery of the signals.

Claims 11-13 are met by the combined systems of Arai and Wasilewski, wherein Arai discloses a combiner (8) for overlaying one program signal over another in col. 4, lines 21-27 and col. 6, lines 37-39, 50-54.

Claims 14-15, 28-33 and 54 are met by the combined systems of Arai and Wasilewski, wherein Arai discloses the dual processing circuitry for two signals and a combiner (8) for overlaying one program signal over another in col. 4, lines 21-27 and col. 6, lines 37-39, 50-54. Additionally, Wasilewski discloses NTSC audio and video processing that is inclusive of a modulator for formatting video and audio signals for output to standard analog devices (TV 284 and speaker 282).

Claim 44 is met by the combined systems of Arai and Wasilewski, wherein Arai discloses that the two video signals are processed by similar circuits throughout the entire reference including but not limited to col. 10, lines 46-60.

Claims 45-47 are met by combined systems of Arai and Wasilewski, wherein Arai discloses combining a first processed and scaled video signal and a processed second video signal for display in figure 1A, col. 6, lines 37-39 and lines 50-54.

Claim 48 is met by combined systems of Arai and Wasilewski, wherein Arai discloses combining a first processed and scaled video signal and a processed second video signal for display in figure 1A, col. 6, lines 37-39 and lines 50-54.

As for claims 49-52, the combined systems of Arai and Wasilewski fail to specifically disclose a third set of processing components for processing a third audio and video signal. Note that the claimed third components have similar circuits to the first and second components described above. It would have been an obvious matter of design choice to include a third set of processing components for processing a third audio and video signal, since such a modification would involve a mere duplication in parts for a multiplied effect. St. Regis Paper Co. v. Bemis Co., Inc., 193 USPQ 8, 11 (7th Cir 1977).

As for claim 57, the combined systems of Arai and Wasilewski fail to specifically disclose wherein the first video signal is provided to a final television and the second video signal is provided to a second television as recited in the claim. It would have been an obvious matter of design choice to include two or more televisions because two different video signals are processed to be displayed.

As for claim 58, the combined systems of Arai and Wasilewski fail to specifically disclose wherein the second video signal is closed caption text display that corresponds to an audio signal

related to the first video signal as recited in the claim. It would have been an obvious matter of design choice to include this feature, since the broadcaster has the ability to transmit two or more related video signals with corresponding audio and/or the viewer has the capability to configure the apparatus to display numerous combinations of audio, video and text for display.

As for claim 59, the combined systems of Arai and Wasilewski fail to specifically disclose that the apparatus is a set top terminal as recited in the claim. It would have been obvious matter of design choice to make the apparatus a set top terminal, since the modification would have involved a mere shifting or separating of parts from a television receiver to the set-top terminal. Nerwin V. Erlichman, 168 USPQ 177, 179 (PTO Bd. of Int. 1969). Alternatively, it would have been an obvious matter of design choice to make the apparatus be inserted into or be part of any video processing receiver such as a set-top box or television, since these receivers are common household items used by viewers for entertainment purposes.

Claim 60 is met by combined systems of Arai and Wasilewski, wherein Arai discloses first and second signal paths for the audio signals in figures 3A and 3B.

Claim 61 is met by the combined systems of Arai and Wasilewski, wherein Arai discloses switching (8,12) between audio outputs for a selected video signal throughout the entire reference including but not limited to col. 2, lines 21-62 and col. 11, lines 58-60.

5. Claims 2-6, 16-20, 22-25, 34-40 and 62-64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arai in view of Willis and further in view Ryu.

Considering claims 2-3, 16-17, 22 and 34-35, Arai discloses an apparatus for displaying a picture on a picture and corresponding method comprising:

a) a plurality of tuners (5A, 5B) (figures 3A and 3B);

b) a plurality of demodulators (27, 28);

c) a plurality of output ports wherein at least two of the plurality of output ports are connected to different tuners (see audio output from demod (27) to switch (10), three video outputs from demod (27) to combiner (8), audio output from demod (28) to switch (10), three video outputs from demod (28) to combiner (8)); and

d) a microprocessor (26) connected to the plural tuners (5A, 5B) and demodulators (27,28) for coordinating signal processing.

Note that Arai is interested in processing several different television standards for simultaneous display (col. 1, lines 5-15) and he indicated that various changes or modifications may be made to his system (col. 17, lines 10-34). However, he fails to disclose (a) a plurality of demultiplexors, a plurality of decrypters, a plurality of decompressors and a plurality of NTSC encoders, and (b) that at least one video signal may have more than one of the plurality of audio signals as recited in the claims.

Wasilewski discloses a system for transmitting and receiving digital television signals (figures 1-14). Digital television is another type of television standard. The digital receiver

(figure 14) comprises: a demodulator (250), demultiplexer (258, 268, 272), decryptors (274), decompressors (276, 280) for decompressing video, audio and text and NTSC encoders (276,280) (columns 21-24). These are typical elements in a digital receiver for processing digital signals transmitted from a central broadcasting facility. Further, note that Wasilewski's system may be used in various applications. See col. 2, line 41 - col. 3, line 14 and col. 34, lines 12-30.

Ryu discloses an apparatus for displaying a picture on a picture and corresponding method comprising a plurality of tuners (9,10), video processing circuits (4,5) for outputting video signals, and sound circuits (8, 12, 13) for outputting more than one of plurality of audio signals (native or foreign) corresponding to at least one video signal. See the entire reference including but not limited to the abstract and col. 2, lines 20-62.

It would have been obvious to one of ordinary skill in the art to modify Arai's system to include a plurality of digital receiving circuit elements such as demultiplexors, decrypters, decompressors and NTSC encoders, as taught by Wasilewski, for the typical advantage of providing digital television receiving elements to properly decode and process digital signals transmitted from a central broadcasting facility and/or to provide higher quality signals to viewers.

Additionally, it would have been obvious to one of ordinary skill in the art to modify the combined systems of Arai and Wasilewski to include at least one video signal to have more than one of the plurality of audio signals, as taught by Ryu, for the advantage of providing a plural picture display receiver with the ability to select a desired audio output based on a plurality of audio signals for a video signal.

Claims 4 and 19 are met by the combined systems of Arai, Wasilewski and Ryu, wherein Ryu discloses a first language (native language) and a second language (foreign language) above.

As for claims 5 and 20, the combined systems of Arai, Wasilewski and Ryu, fail to specifically disclose stereo audio signals in first and second languages as recited in the claim. It would have been obvious to one of ordinary skill in the art to modify the combined systems of Arai, Wasilewski and Ryu to include stereo audio signals in first and second languages for the typical advantage of providing audio signals with improved fidelity.

Claims 6, 23-25 and 38-40 are met by the combined systems of Arai, Wasilewski and Ryu, wherein Ryu discloses switching (8,12) between audio outputs and for a selected video signal throughout the entire reference including but not limited to col. 2, lines 21-62.

Claims 18 and 36-37 are met by the combined systems of Arai, Wasilewski and Ryu, wherein Arai discloses a combiner (8) for overlaying one program signal over another in col. 4, lines 21-27 and col. 6, lines 37-39, 50-54. Additionally, note that Ryu discloses switching (8,12) between audio outputs.

As for claims 62-64, the combined systems of Arai and Wasilewski fail to specifically disclose (a) first and second audio signals are provided in multiple languages and wherein a menu

of available languages is present on the screen for selection (b) first and second audio signals are associated with the first video signal, (c) and wherein a switch is operable to select additional audio signals for display associated with the second video signal as recited in the claims respectively.

Ryu discloses a plural picture display system with multiple languages for each picture above. See the entire reference including but not limited to switch (8,12), figure 1, the abstract and col. 2, lines 20-62.

Furthermore, the Examiner takes Official Notice that it is notoriously well known in the art to select an option from a menu displayed on a screen.

It would have been obvious to one of ordinary skill in the art to modify the combined systems of Arai and Wasilewski to include plural audio signals in multiple languages, first and second audio signals associated with the first video signal and a switch operable to select additional audio signals for display associated with the second video signal, as taught by Ryu, for the advantage of providing a plural picture display receiver with the ability to select a desired audio output based on a plurality of audio signals for a selected video signal (first or second video signals).

6. Claims 53, 55-56, 65, 68, 70 and 72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arai and Wasilewski as applied to claims 1, 21, 26 and 41 above, and further in view of Park.

As for claims 53, 65, 68, 70 and 72, the combined systems of Arai and Wasilewski fail to specifically disclose a digital television or that the signals are HDTV signals as recited in the claims.

Park discloses a picture in picture system comprising a HDTV receiver for receiving and processing a plurality of digital signals including HDTV signals. See abstract and col. 2, line 8 - col. 4, line 11.

It would have been obvious to one of ordinary skill in the art to modify the combined systems of Arai and Wasilewski to include a digital television and HDTV signals, as taught by Park, for the advantage of receiving and processing television signals of higher quality.

As for claims 55 and 56, the combined systems of Arai and Wasilewski fail to specifically disclose that the apparatus is an upgrade card the is insertable into a set-top terminal or television to provide digital picture-in-picture capability as recited in the claims. It would have been obvious to one of ordinary skill in the art to modify the combined systems of Arai and Wasilewski to include a digital signals, as taught by Park, for the advantage of receiving and processing television signals of higher quality. Further, it would have been an obvious matter of design

choice to make the apparatus in an upgrade card, since the modification would have involved a mere separation of parts. Nerwin V. Erlichman, 168 USPQ 177, 179 (PTO Bd. of Int. 1969). Moreover, it would have been obvious as a matter of design choice to make the apparatus be insertable into any video processing receiver such as a set-top box or television, since audio and video signals are commonly received by video processing equipments that are inclusive of the set-top box and television.

7. Claims 66-67, 69 and 71 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arai and Wasilewski as applied to claims 2, 16, 22 and 34 above, and further in view of Park.

As for claims 66-67, 69 and 71, the combined systems of Arai, Wasilewski and Ryu fail to specifically disclose that the signals are HDTV signals as recited in the claims.

Park discloses a picture in picture system comprising a HDTV receiver for receiving and processing a plurality of HDTV signals. See abstract and col. 2, line 8 - col. 4, line 11.

It would have been obvious to one of ordinary skill in the art to modify the combined systems of Arai and Wasilewski to include HDTV signals, as taught by Park, for the advantage of receiving and processing television signals of higher quality.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

9. Claims 1, 21, 41, 44 and 45 are rejected under 35 U.S.C. 102(e) as being anticipated by Park.

Considering claims 1, 21 and 41, Park discloses an apparatus for outputting a plurality of signals or an apparatus for displaying picture on picture and corresponding method comprising:

a) plural tuners (col. 4, lines 40-44);

b) plural decompressors or signal processing paths (100,200, figure 3)

c) microprocessor (400); and

d) a plurality of output ports wherein at least two of the plurality of output ports are connected to different tuners (the audio output from decompressor (100) to combiner (400), the video output

from decompressor (100) to combiner (400), the audio output from decompressor (200) to combiner (400), and the video output from decompressor (200) to combiner (400).

Claim 44 is met by signal processing paths (100, 200) which processes video signals of the same quality.

Claim 45 is met by combiner (500).

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ng et al. and Yoshida disclose picture in picture processing for HDTV signals.

11. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for formal communications intended for entry and for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington. VA., Sixth Floor (Receptionist).

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chris Grant whose telephone number is (703) 305-4755. The examiner can normally be reached on Monday-Friday from 8:00am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Faile, can be reached on (703) 305-4380.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to customer service whose telephone number is (703) 306 0377.

Christopher Grant
Primary Examiner
September 9, 2002